20. (Three Times Amended) A method of delivering a heterologous gene to an animal heart *in vivo*, wherein the method comprises administering to the animal heart an adenoviral vector comprising, in an orientation opposite to the direction of transcription of the adenoviral region into which it is inserted, (a) a heterologous gene; (b) a promoter positioned upstream from the heterologous gene, the heterologous gene being under the regulatory control of the promoter; (c) a eukaryotic splice acceptor and donor site positioned downstream of the promoter and upstream of the heterologous gene; and (d) a polyadenylation sequence.

Please add the following claims:

21. (New) The adenoviral vector of claim 1, which comprises at least one insertion site for cloning a selected heterologous gene, and, in an orientation opposite to the direction of adenoviral E1 gene transcription, (a) a heterologous promoter positioned upstream from said at least one insertion site, wherein, upon cloning of the selected heterologous gene into said at least one insertion site, said gene is under the regulatory control of said heterologous promoter; (b) a eukaryotic splice acceptor and splice donor site positioned downstream of said promoter and upstream of said at least one insertion site; and (c) a polyadenylation sequence positioned downstream of said insertion site.

22. (New) The adenoviral vector of claim 1, which comprises at least one insertion site for cloning a selected heterologous gene, and, in an orientation 3' to 5' relative to adenoviral E1 gene transcription, (a) a heterologous promoter positioned upstream from said at least one insertion site, wherein, upon cloning of the selected heterologous gene into said at least one insertion site, said gene is under the regulatory control of said heterologous promoter; (b) a eukaryotic splice acceptor and splice donor site positioned downstream of said promoter and upstream of said at least one insertion site; and (c) a polyadenylation sequence positioned downstream of said insertion site.

REMARKS

The Present Invention

The present invention is directed to an adenoviral vector for expressing a heterologous gene in a host cell, a host cell infected with such a vector, a method of producing a selected protein by culturing a host cell infected with such a vector, and a method of delivering a